

REMARKS

1. CLAIM AMENDMENTS

Claims 1–19 were pending in the application. Claims 1, 2, 11, 12 and 13 have been amended, and claim 20 has been added to clarify Applicant’s claimed subject matter. Support for the claim amendments and new claim is found in the specification as follows:

Claim	Support in specification
Claims 1, 2, 11, and 12	original claims 2 and 12; p. 5, ll. 23-27; p. 6, ll. 34 – p. 7, ll. 3; p. 9, ll. 27 – p. 31; p. 13, ll. 10-17.
Claim 13	p. 12, ll. 21 – 24; p. 15, ll. 23 – 27.
Claim 20	p. 3, ll. 13-22; p. 4, ll. 26-35; p. 5, ll. 23-27; p. 6, ll. 34- p. 7, ll. 3; p. 9; ll. 27-31; p. 13, ll. 10-17.

No new matter has been added. Upon entry of the present amendment, claims 1–20 will be pending.

2. THE DOUBLE PATENTING REJECTION SHOULD BE WITHDRAWN

Original claim 14 will be objected to under 37 C.F.R. § 1.75 if claim 13 is found allowable. Amended claim 13 is no longer a substantial duplicate of claim 14, which obviates any possible double patenting objection.

3. THE REJECTIONS UNDER 35 U.S.C. § 102 SHOULD BE WITHDRAWN

The standard for an anticipatory reference is set forth in *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987): “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *See also Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (holding that “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim”).

3.1 THE CLAIMS ARE NOT ANTICIPATED BY JONES

Claims 1, 3, 4, 6, 7, 11, 15 and 16 are rejected under 35 U.S.C. § 102(b), as

allegedly being anticipated by US 5,920,080 to Jones ("Jones"). Applicant traverses the rejection on the basis of the claims as amended.

The instant application provides a color display unit in which degradation of an organic electroluminescent layer due to moisture and gas components from the organic color filter is reduced. *See* application, *e.g.*, p. 3, ll. 3–7. As recited in amended independent claims 1 and 11, Applicant's color display unit comprises a substrate, an organic electroluminescent device located on the substrate, which covers the organic electroluminescent device, a color filter located on the passivation film, and a mar-proof protective film coating the color filter to protect the color filter from damage. Applicant's mar-proof protective film may be formed of any mar-proof transparent material. *See* application, *e.g.*, p. 13, ll. 10–17. For example, the mar-proof protective film may be formed of an ultraviolet curing acrylic resin. *See* application, *e.g.*, p. 5, ll. 23–27. Applicant has discovered that the color filter can be degraded or damaged if they are subjected to too much heat, which can result in impaired performance due to decreased transmittance. *See* application, *e.g.*, p. 10, ll. 26–32. Accordingly, Applicant's claimed color display unit exhibits improved transmittance, because a smaller amount of heat is generated when Applicant's mar-proof film is applied to the color filter. In addition, since no foreign object can directly contacts the color filter, and the color filter in Applicant's color display unit is prevented from being damaged.

Jones teaches overlaying the color converters with a cover glass. In particular, Jones discloses overlaying a transparent protective cover glass 510 formed from silicon on the color converter layer 520. *See* Jones, *e.g.*, col. 9, ll. 37–42, and Fig. 3. As readily apparent to one of skill in the art, such a silicon glass is a dielectric material, which Jones teaches is deposited by methods such as evaporation, chemical vapor deposition (CVD), sputter or ion beam deposition. *See* Jones, *e.g.*, col. 7, ll. 1–14. Such deposition methods apply relatively great amount of heat to the color filter, which can cause the color filter to be degraded or damaged by heat. By contrast, Applicant teaches applying a mar-proof protective film, such as an ultraviolet curing acrylic resin, a silicone resin hardcoat material or a polyester film. *See* application, *e.g.*, p. 13, ll. 10–17. Applicant's mar-proof film subjects the color filters to less heat, which helps to improve the transmittance of Applicant's color display unit. *See* application, *e.g.*, p. 10, ll. 26–

32. Furthermore, Jones teaches applying a silicon glass cover that is on the order of 0.2 mm thick over the color converters. *See Jones, e.g., col. 9, ll. 36-42*). As Applicant has pointed out, such a thick glass film has the undesirable effect of increasing the thickness of the display unit. *See application, e.g., p. 13, ll. 19-23*. By contrast, Applicant has applied a mar-proof protective film, which reduces the thickness of the color display unit. *See application, e.g., p. 13, ll. 19-23*. Applicant respectfully submits that Jones does not teach Applicant's claimed color display unit, therefore amended claims 1 and 11 are not anticipated by Jones. Applicant also respectfully submits that dependent claims 3, 4, 6 and 7, which include the limitations of independent claim 1, and dependent claims 15 and 16, which include the limitations of independent claim 11, are similarly not anticipated by Jones.

In view of the foregoing, the rejection of claims 1, 3, 4, 6, 7, 11, 15 and 16 under 35 U.S.C. § 102(b) as anticipated by US 5,920,080 to Jones should be withdrawn.

3.2 THE CLAIMS ARE NOT ANTICIPATED BY ROITMAN

Claims 1-4, 6, 11, 12 and 15 are rejected under 35 U.S.C. § 102(e), as allegedly being anticipated by US 6,552,488 to Roitman *et al.* Applicant traverses the rejection on the basis of the claims as amended.

As recited in amended independent claims 1 and 11, Applicant's color display unit comprises a substrate, an organic electroluminescent device located on the substrate, which covers the organic electroluminescent device, a color filter located on the passivation film, and a mar-proof protective film coating the color filter to protect the color filter from damage. As previously explained, Applicant's claimed color display unit exhibits improved transmittance, because a smaller amount of heat is generated when Applicant's mar-proof film is applied to the color filter. In addition, since no foreign object can directly contacts the color filter, and the color filter in Applicant's color display unit is prevented from being damaged.

Roitman teaches overlaying a protective layer of silicon nitride, aluminum oxide, silicon oxynitride or silicon dioxide over the color filters. *See Roitman, e.g., col. 6, ll. 62 - col. 7, ll. 21*. Roitmans' protective overlay is similar to Jones' cover glass. Roitmans' protective film is deposited by a semiconductor fabrication method, preferably such as plasma deposition.

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See Roitman, *e.g.*, col. 7, ll. 6 – 18. Such semiconductor fabrication methods apply relatively great amount of heat to the color filter, which can cause the color filter to be degraded or damaged. By contrast, Applicant teaches applying a mar-proof protective film, such as an ultraviolet curing acrylic resin, a silicone resin hardcoat material or a polyester film. *See* application, *e.g.*, p. 13, ll. 10–17. Applicant’s mar-proof film subjects the color filters to less heat, which helps to improve the transmittance of Applicant’s color display unit. *See* application, *e.g.*, p. 10, ll. 26–32. Furthermore, as Applicant has pointed out, such glassy dielectric overlays have the undesirable effect of increasing the thickness of the display unit. *See* application, *e.g.*, p. 13, ll. 19–23. By contrast, Applicant’s mar-proof protective film helps to reduce the thickness of the color display unit. *See* application, *e.g.*, p. 13, ll. 19–23. Applicant respectfully submits that Roitman does not teach Applicant’s claimed color display unit, therefore amended claims 1 and 11 are not anticipated by Roitman. Applicant also respectfully submits that dependent claims 2–4 and 6, which include the limitations of independent claim 1, and dependent claims 12 and 15, which include the limitations of independent claim 11, are similarly not anticipated by Roitman.

In view of the foregoing, the rejection of claims 1–4, 6, 11, 12 and 15 under 35 U.S.C. § 102(e) as anticipated by US 6,552,488 to Roitman *et al.* should be withdrawn.

4. THE REJECTIONS UNDER 35 U.S.C. § 103 SHOULD BE WITHDRAWN

To establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all the claim limitations. *M.P.E.P. 2143*. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is a suggestion found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *M.P.E.P. 2143.01*.

4.1 THE CLAIMS ARE NOT OBVIOUS OVER JONES

Claims 5, 13 and 14 are rejected under 35 U.S.C. § 103(a), as allegedly being obvious over US 5,920,080 to Jones. Applicant traverses the rejection on the basis of the claims as amended.

Claims 5, 13 and 14 are not obvious over Jones, as Jones does not teach or suggest Applicant's claimed color display unit. Jones teaches overlaying the color converters with a silicon cover glass. Such a silicon glass is a dielectric material, which Jones teaches is deposited by methods such as evaporation, chemical vapor deposition (CVD), sputter or ion beam deposition. *See Jones, e.g., col. 7, ll. 1-14.* Such deposition methods apply relatively great amount of heat to the color filter, which can cause the color filter to be degraded or damaged by heat. Therefore, there is no teaching or suggestion in Jones of applying a film that subjects the color filters to less heat to improve their transmittance. In particular, there is no teaching or suggestion in Jones of applying Applicant's mar-proof protective film. Examples of Applicant's mar-proof protective films include an ultraviolet curing acrylic resin, a silicone resin hardcoat material and a polyester film. *See application, e.g., p. 13, ll. 10-17.* Applicant's mar-proof film, which helps to improve the transmittance of Applicant's color display unit. *See application, e.g., p. 10, ll. 26-32.* Thus, Jones does not teach or suggest all of the claims limitations of claims 5, 13 and 14. Applicant respectfully submits that Applicant's claimed subject matter is not obvious over Jones.

Furthermore, Jones actually teaches away from Applicant's claimed subject matter. Jones teaches applying a silicon glass cover that is on the order of 0.2 mm thick over the color converters. *See Jones, e.g., col. 9, ll. 36-42).* As Applicant has pointed out, such a thick glassy overlay has the undesirable effect of increasing the thickness of the display unit. *See application, e.g., p. 13, ll. 19-23.* By contrast, Applicant has applied a mar-proof protective film, which reduces the thickness of the color display unit. *See application, e.g., p. 13, ll. 19-23.* Applicant submits that one of skill in the art would not be motivated to produce Applicant's color display unit based on Jones' teachings of using a silicon glass cover. Therefore, Applicant respectfully submits that the claimed subject matter is not obvious over Jones.

In view of the foregoing, the rejection of claims 5, 13 and 14 under 35 U.S.C. § 103(a) as obvious over US 5,920,080 to Jones should be withdrawn.

4.2 THE CLAIMS ARE NOT OBVIOUS OVER ROITMAN

Claims 5, 13 and 14 are rejected under 35 U.S.C. § 103(a), as allegedly being

obvious over US 6,552,488 to Roitman *et al.* ("Roitman"). Applicant traverses the rejection on the basis of the claims as amended.

Claims 5, 13 and 14 are not obvious over Roitman. As Applicant has previously explained, Roitman's protective overlay is similar to Jones' cover glass. Roitman's protective overlay silicon nitride, aluminum oxide, silicon oxynitride or silicon dioxide, is deposited by a semiconductor fabrication method, such as such as plasma deposition. *See* Roitman, *e.g.*, col. 6, ll. 62 – col. 7, ll. 21; col. 7, ll. 6 – 18. Such semiconductor fabrication methods apply relatively great amount of heat to the color filter, which can cause the color filter to be degraded or damaged. Similar to Jones, there is no teaching or suggestion in Roitman of applying a film that subjects the color filters to less heat to improve their transmittance. In particular, there is no teaching or suggestion in Roitman of applying Applicant's mar-proof protective film. Applicant's mar-proof film, which helps to improve the transmittance of Applicant's color display unit. *See* application, *e.g.*, p. 10, ll. 26–32. Thus, similar to Jones, Roitman neither teaches nor suggests all of the claims limitations of claims 5, 13 and 14. Applicant respectfully submits that Applicant's claimed subject matter is not obvious over Roitman.

Similar to Jones, Roitman actually teaches away from Applicant's claimed subject matter. Roitman teaches applying a glassy dielectric overlay on the color filters. *See* Roitman, *e.g.*, col. 7, ll. 3 – 21. As Applicant has pointed out, such a glassy dielectric overlay has the undesirable effect of increasing the thickness of the display unit. *See* application, *e.g.*, p. 13, ll. 19–23. By contrast, Applicant has applied a mar-proof protective film, which reduces the thickness of the color display unit. *See* application, *e.g.*, p. 13, ll. 19–23. Applicant submits that one of skill in the art would not be motivated to produce Applicant's color display unit based on Roitman's teachings of using a glassy dielectric protective overlay. Therefore, Applicant respectfully submits that the claimed subject matter is not obvious over Roitman.

In view of the foregoing, the rejection of claims 5, 13 and 14 under 35 U.S.C. § 103(a) as obvious over US 6,552,488 to Roitman *et al.* should be withdrawn.

4.3 THE CLAIMS ARE NOT OBVIOUS OVER JONES IN VIEW OF TAGUCHI

Claims 8–9 and 17–18 are rejected under 35 U.S.C. § 103(a), as allegedly being obvious over US 5,920,080 to Jones in view of US 5,099,172 to Taguchi *et al.* (“Taguchi”). Applicant traverses the rejection on the basis of the claims as amended.

Claims 8–9 and 17–18 are not obvious over Jones in view of Taguchi. As previously explained, Jones does not teach or suggest Applicant’s claimed subject matter. Applicant submits that the combination of Jones with Taguchi does not render Applicant’s claimed subject matter obvious, because Taguchi does not cure the deficiencies of Jones. Taguchi does not teach or suggest applying Applicant’s mar-proof protective film to the color filters, which helps to improve the transmittance of Applicant’s color display unit. Thus, Jones in combination with Taguchi does not teach or suggest all of the claims limitations of claims 8–9 and 17–18. Therefore, Applicant’s claimed subject matter is not obvious over Jones in combination with Taguchi.

In view of the foregoing, the rejection of claims 8–9 and 17–18 under 35 U.S.C. § 103(a) as obvious over US 5,920,080 to Jones in view of US 5,099,172 to Taguchi *et al.* should be withdrawn.

4.4 THE CLAIMS ARE NOT OBVIOUS OVER ROITMAN IN VIEW OF TAGUCHI

Claims 8–9 and 17–18 are rejected under 35 U.S.C. § 103(a), as allegedly being obvious over US 6,552,488 to Roitman *et al.* in view of US 5,099,172 to Taguchi *et al.* Applicant traverses the rejection on the basis of the claims as amended.

Claims 8–9 and 17–18 are not obvious over Roitman in view of Taguchi. As previously explained, Roitman does not teach or suggest Applicant’s claimed subject matter. Applicant submits that the combination of Roitman with Taguchi does not render Applicant’s claimed subject matter obvious, because Taguchi does not cure the deficiencies of Roitman. Taguchi does not teach or suggest applying Applicant’s mar-proof protective film to the color filters, which helps to improve the transmittance of Applicant’s color display unit. Thus, Roitman in combination with Taguchi does not teach or suggest all of the claims limitations of

claims 8–9 and 17–18.

In view of the foregoing, the rejection of claims 8–9 and 17–18 under 35 U.S.C. § 103(a) as obvious over US 6,552,488 to Roitman *et al.* in view of US 5,099,172 to Taguchi *et al.* should be withdrawn.

4.5 THE CLAIMS ARE NOT OBVIOUS OVER JONES IN VIEW OF OSAWA

Claims 10 and 19 are rejected under 35 U.S.C. § 103(a), as allegedly being obvious over US 5,920,080 to Jones in view of US 5,892,492 to Osawa *et al.* (“Osawa”). Applicant traverses the rejection on the basis of the claims as amended.

Claims 10 and 19 are not obvious over Jones in view of Osawa. As previously explained, Jones does not teach or suggest Applicant’s claimed subject. Applicant submits that the combination of Jones with Osawa still does not arrive at or suggest Applicant’s claimed subject matter. Osawa does not teach or suggest applying Applicant’s mar-proof protective film to the color filters, which helps to improve the transmittance of Applicant’s color display unit. Applicant respectfully submits that the combination of Jones with Osawa does not teach or suggest all of the claims limitations of claims 10 and 19, and therefore does not render the claimed subject matter obvious.

In view of the foregoing, the rejection of claims 10 and 19 under 35 U.S.C. § 103(a) as obvious over US 5,920,080 to Jones in view of US 5,892,492 to Osawa *et al.* should be withdrawn.

4.6 THE CLAIMS ARE NOT OBVIOUS OVER ROITMAN IN VIEW OF OSAWA

Claims 10 and 19 are rejected under 35 U.S.C. § 103(a), as allegedly being obvious over US 6,552,488 to Roitman *et al.* in view of US 5,892,492 to Osawa *et al.* Applicant traverses the rejection on the basis of the claims as amended.

Claims 10 and 19 are not obvious over Roitman in view of Osawa. Applicant previously explained that Roitman does not teach or suggest Applicant’s claimed subject. Applicant submits that the combination of Roitman with Osawa still does not arrive at or suggest

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Applicant's claimed subject matter. Osawa does not teach or suggest applying Applicant's mar-proof protective film to the color filters, which helps to improve the transmittance of Applicant's color display unit. Applicant respectfully submits that the combination of Roitman with Osawa does not teach or suggest all of the claims limitations of claims 10 and 19, and therefore does not render the claimed subject matter obvious.

In view of the foregoing, the rejection of claims 10 and 19 under 35 U.S.C. § 103(a) as obvious over US 6,552,488 to Roitman *et al.* in view of US 5,892,492 to Osawa *et al.* should be withdrawn.

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CONCLUSION

Applicant respectfully requests entry of the foregoing amendments and remarks into the file of the above-identified application. Applicant believes that each ground for rejection has been successfully overcome or obviated, and that all pending claims are in condition for allowance. Withdrawal of the Examiner's rejections, and allowance of the application, are respectfully requested.

AUTHORIZATION

No fee is believed due in connection with this response. In the event that a fee is required for consideration of this Amendment, please charge any additional fees to Deposit Account No. 13-4500, Order No. 5000-5107. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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